contains the percentages of UEs the eNB attempts to distribute to each layer. In this case, the eNB **170** (e.g., or SON server) attempts to have 40% of UEs distributed evenly to cells with cell IDs A-D (each with 10% of the UEs) and attempts to have 60% of UEs distributed evenly to cells with cell IDs E, F, and G (each with 20% of the UEs). Operator-provisioned data structure **600-1** includes operator-provisioned coverage distances **650** and operator-provisioned angles of arrival **655**, both of which are provisioned (e.g., set) by the operator. A coverage area profile **695** (e.g., **695-1** in this example) for each cell may include one or both of operator-provisioned coverage distances **650** and/or operator-provisioned angles of arrival **655**. SON-derived data structure **600-1** includes SON-derived coverage distance histogram **658** and SON-derived angles of arrival histogram **657**, both of which are determined (e.g., set) by a SON using a histogram of actual coverage distances and angles of arrival. A coverage area profile **695** (e.g., **695-2** in this example) for each cell may include one or both of SON-derived coverage distance histogram **658** and/or SON-derived angles of arrival histogram **657**. A coverage distance is a maximum distance beyond which the UE cannot access the cell. The serving cell is the cell to which the UE is connected for service, and the overlaying cells are additional cells to which the UE can connect at its location. Note that the serving cell also overlies the overlying cells (and vice versa, the overlying cells overlie the serving cell, at least to some degree).

[0052] With overlapping layers in an area, one example of an implementation is to have an effective distribution of UEs across these layers such that the UEs are accessing on different layers at the desired percentage factors. Each overlaying layer is associated with a unique cell, and the serving cell is the cell to which the UE is connected for service. In this method, the serving cell determines which layer the UE should be sent to so that the distribution of UEs in an area across overlaying layers is maintained.

[0053] It is noted that the data such as in FIGS. **6A** and **6B** and other figures herein are for different frequencies from the same or different bands. However, the techniques herein will equally apply to heterogeneous networks, where different layers provide varying cell coverage.

[0054] An alternative approach to the coverage distances **650** is for the eNB **170** to self-learn the coverage details based on access distances **250** and the distances at which inter-frequency handovers are attempted from a high frequency band cell to a lower frequency band cell for coverage reasons. These coverage distances are shown as coverage distance histogram **658**. In the self-learning approach, it is possible in an exemplary embodiment that SON-based procedures will be used to perform the following:

[0055] collect such access distance data from each overlying cell **220**;

[0056] determine overlying cells (such as cell pairs) based on site information; and

[0057] share the access distance data across overlying cells.

[0058] In the example of FIG. **6B**, the SON-derived coverage distance histogram **658** is one example of coverage distances that can be determined using these SON-based procedures.

[0059] In addition to access distances **250**, the angle of arrival can be also added as a decision metric. The angle of arrival for the operator-provisioned coverage angles of arrival **655** and the SON-derived angles of arrival histogram **657** are examples of this. If a UE is within the range of angles (e.g., 20-100 degrees for Cell IDs A and B), then the UE may be assigned to one of the cells having a cell ID A or B; if the UE is outside this range of angles, the UE is not assigned to one of the cells having the cell ID A or B. The references **660** and **670** are described below.

[0060] The examples herein are not limited to a single radio access technology such as E-UTRAN. Another possibility, for instance, for the tables **600-1** and **600-2** is illustrated by FIG. **6A** and reference **675**, where other RAT(s) (e.g., CDMA, second generation (2G), third generation (3G) technologies, or the like) with their corresponding frequencies would also be included in the tables **600-1** and **600-2**. Although not shown, the other RAT(s) and their corresponding frequencies would also have the information in reference numerals **640**, **650**, **655**, **657**, or **658**, as applicable.

[0061] The following example of an algorithm is proposed to enhance the load balancing UEs at the time of transitioning to idle mode. This example will be described in part through reference to FIG. **7**, which is a logic flow diagram for distributing (e.g., load balancing) UEs at the time of transitioning to idle mode based on access distance. Note that distributing UEs is performed typically for load balancing reasons, such that some "load" (e.g., UE accesses in the cell) are balanced among layers. Thus the terms "distributing" and "load balancing" are typically considered to be synonymous herein, but the distribution need not be limited to load balancing. FIG. **7** also illustrates the operation of an exemplary method, a result of execution of computer program instructions embodied on a computer readable memory, functions performed by logic implemented in hardware, and/or interconnected means for performing functions in accordance with exemplary embodiments. The eNB **170**, e.g., under control in part by the distributing UEs at the time of transitioning to idle mode module **150**, is assumed to perform the blocks in FIG. **7**.

[0062] In response to a determination the UE should be released for distributing UEs at the time of transitioning to idle mode, the eNB **170** will determine the access distance **250** and possibly the angle of arrival **285** for the UE. The eNB **170** may use the UE Rx-Tx timing difference information monitored for each UE to determine the access distance **250**, in an exemplary embodiment. Thus, in block **710**, the eNB **170** determines whether it is time to release a UE for distributing UEs at the time of transitioning to idle mode. For instance, the eNB **170** could detect inactivity for the UE or an MME could initiate the release of the UE. If not (block **710**=No), the eNB **170** waits (e.g., by returning to block **710**) until it is time to release a UE.

[0063] If it is time to release the UE for distributing (e.g., load balancing) UEs at the time of transitioning to idle mode (block **710**=Yes), the eNB **170** in block **720** determines the access distance **250** (e.g., and angle of arrival **285**) for the UE **110**.

[0064] Based on the UE's current access distance **250**, the eNB **170** filters out the overlying frequencies, e.g., which do not provide reliable access at this access distance. The eNB **170** may use the data structure **600** described above for this process, although the invention is not limited to this data structure. This allows the eNB **170** to identify the candidate layers (e.g., frequencies(s) and corresponding cells) which have reliable coverage at the UE's current access distance. When both the operator-provisioned details (see coverage